



Federal Air Surgeon's Medical Bulletin

Published by
FAA Civil Aeromedical Institute
 Aeromedical Education Division
 P.O.B. 25082
 Oklahoma City, OK 73125-5064



U.S. Department of Transportation
Federal Aviation Administration

00-2

Summer 2000

Aviation Safety Through Aviation Medicine

For FAA Aviation Medical Examiners, Office of Aviation Medicine Personnel, Flight Standards Inspectors, and Other Aviation Professionals.

AME Profile

'Yours for Good Health and Safe Flying'

W E DIDN'T KNOW THAT the first article he submitted three years ago would extend into a steady infusion of "topics and issues just for the health of pilots," but it did. Now, as the twelfth consecutive article is published in the *Bulletin*, we congratulate Dr. Glenn Stoutt, the author of this excellent series of articles, for his persistence and dedication to the art and science of aviation medicine.

The first article published in the fall 1998 *Bulletin* clearly identified the mission and intended audience for the articles. The dramatic introduction set the stage:

"Consider this situation: A 48-year-old male airman is markedly obese, smokes three packs a day, does not exercise, carries a high anger level, has a 'short fuse' and a high-stress job, eats a diet loaded with salt, fat, and sugar, and has a blood pressure of 150/90. Throw in a cholesterol level of 290, a triglycerides of 300, and an HDL of only 22. According to the FARs, he *legally* has nothing that would disqualify him."

Regarding this unhealthy airman, Dr. Stoutt observed that "this pilot is a walking time bomb! And, there are many more just like him."

An aviation medical examiner since 1960, Stoutt observed some common health-related problems his applicants



Dr. Stoutt

for medical certification seemed to have. He became concerned because he had concluded that "issuing a valid Form 8500-8 gives only basic information about the mental, physical, and emotional condition of an airman." Faulty life styles, he observed, contribute to "about 70 percent of medical problems and cannot be quantified on the application form."

Hoping to influence the health choices made by pilots in his area, in 1996 he launched a monthly column called *Pilots' Health*, which was published in the Louisville, Ky., Aero Club's newsletter, *Prop Wash*. In these articles, he mixed aviation medicine (FAA medical facts and standards) along with tips and discussions about exercise, weight control, nutrition, and lifestyle, all served in an entertaining fashion. The acceptance by the pilots was "immediate and enthusiastic."

The subsequent articles were reprinted as a booklet for pilots and is provided free to each airman applicant who comes to his office. The core topics include blood pressure, cholesterol, dietary choices, anger, exercise, weight loss, smoking, and alcohol.

Liberal laced throughout the articles written for the *Bulletin* are "tips and pearls," like "Anything that comes out of a vending machine is nutritional

Continued on page 7...

Be sure to read Dr. Stoutt's latest feature in this issue (page 10), "Depression: A Recoverable Stall."

AMCS On-line Security And Privacy Considerations

Here are a few reminders to aviation medical examiners regarding security issues when accessing airman records and files on the Internet-based Airman Medical Certification System:

- ✓ The ID/Password combination is issued **For Official Use Only**.
- ✓ Each person should have his or her own ID/Password combination. These are NOT to be shared with anyone.
- ✓ Do not post DIWS passwords on monitors, keyboards, or any other location where unauthorized people may see them (risk of compromise)
- ✓ When a co-worker is no longer employed by your office, notify the Aeromedical Certification Division immediately.

HEADS UP

Medical Kits NPRM.....	2
Certification Update	3
Atrial Fibrillation and Substance Abuse	4
New Website Service	5
Personality Disorder	6
OAM News	8
Stalling Depression	10
AME Training News	12
Meetings Calendar	12

The Federal Air Surgeon's Column

The Aviation Medical Assistance Act

ON APRIL 24, 1998, Congress enacted the Aviation Medical Assistance Act, which, in part, directed the Federal Aviation Administration to determine whether current minimum requirements for air carrier crewmember medical emergency training and air carrier emergency medical equipment should be modified. At the core of the legislation was the issue of requiring automated external defibrillators (AEDs) on air carrier flights, as well as the question of enhancing current requirements regarding the contents of medical kits.

How much medical equipment should be required in air carrier operations has been a matter of controversy and debate for years. Up

until December of 1986, there was no agency requirement for medical equipment or medications, other than a first-aid kit. The requirement for a medical kit was the final outcome of a petition for rulemaking submitted to the FAA in the spring of 1981 by the Research Group of the Aviation Consumer Action Project. Without going into detail of all that transpired in relationship to that petition, the agency issued a Notice of Proposed Rulemaking (NPRM) on medical kits in the spring of 1985. Contained in that Notice was the proposal that a kit include a significant number of medications and equipment to treat medical emergencies.

The proposed contents of the kit met opposition from some segments of the medical community based on concerns that, if misused, some of the equipment and medications proposed for inclusion in the kit could make matters worse for stricken passengers. This, coupled with a concern for the lack of data to support such a comprehensive kit, led to a significant reduction in the kit's contents. In the final rule, much of the equipment was deleted; of the medications, only glucose, nitroglycerin, epinephrine, and diphenhydramine remained. In the years that have passed since the rule was implemented, there has been continuing public and news media interest in the sufficiency of the required medical kit, especially in light of the more extensive medical kits found on board many foreign air carriers.

The FAA has carefully assessed all the issues related to medical events that occur on board aircraft. This assessment, coupled with data collected pursuant to the Aviation Medical Assistance Act, led the FAA to issue an NPRM on May 24, 2000, that would require all air carrier aircraft (over 7,500 lbs. payload with at least one flight attendant) to carry AEDs and an enhanced medical kit.



Jon L. Jordan, MD, JD

Requiring the placement of medications and sophisticated medical equipment such as AEDs on board aircraft may raise significant questions in the minds of many. These might include:

- ☐ what are the cost/benefit issues?
- ☐ what crewmember training should be required?
- ☐ who would be permitted to use the equipment?
- ☐ will passengers who have medical training voluntarily come forward and use the equipment?
- ☐ what legal liability exists and for whom?

The list of questions could be quite extensive.

It is important that as many interested and knowledgeable persons as possible comment on this proposed rule. Therefore, I encourage you to read the NPRM and let your thoughts be known.

Internet users may access the document on the FAA's website at:
<http://www.faa.gov/avr/arm/n00-03.pdf>

To obtain a written copy, contact:
FAA Office of Rulemaking, ARM-1
800 Independence Ave., SW
Washington, DC 20591
Phone: (202) 267-9680
Refer to Docket No. FAA-2000-7119 when requesting a copy.

Your comments may be filed electronically, as well as in writing.

JLJ

Federal Air Surgeon's Medical Bulletin

Secretary of Transportation

Rodney E. Slater

FAA Administrator

Jane F. Garvey

Federal Air Surgeon

Jon L. Jordan, MD, JD

Editor

Michael E. Wayda

The Federal Air Surgeon's Medical Bulletin is published quarterly for Aviation Medical Examiners and others interested in aviation safety and aviation medicine. The Bulletin is prepared by the FAA's Civil Aeromedical Institute, with policy guidance and support from the Office of Aviation Medicine. An Internet on-line version of the Bulletin is available at: <http://www.cami.jccbi.gov>

Authors may submit articles and photos for publication in the Bulletin directly to:

Editor, FASMB

FAA Civil Aeromedical Institute

AAM-400

P.O. Box 25082

Oklahoma City, OK 73125

e-mail: Mike_Wayda@mmacmail.jccbi.gov

Aeromedical Certification Update

Warren Silberman, DO, MPH

BEFORE I DISCUSS THIS quarter's topics, I want to give you all some information concerning the new Internet version of the Airman Medical Certification System.

- **Stand by.** I just gave a list to our regional offices of those aviation medical examiners who have been sending in their examinations as a hard copy versus transmitting them as required by regulation. Your Regional Flight Surgeon should be contacting you!

- **TRANS.** Please remember to place the word "TRANS" at the top right hand corner of the original exam copies that you mail into AMCD (Aeromedical Certification Division) for scanning. Approximately half of the originals that are sent into AMCD have not been so labeled, resulting in extra work for our data entry people.

- **Special Issuance.** I have also noted that some aviation medical examiners (AMEs) have been sending in their examinations instead of transmitting when they also send us material required by an Authorization for Special Issuance. I know that we used to ask you to do this when you were using the old DOS-based AMCS, but we want you to transmit the exam and then attach the original exam, minus completing the backside, along with the airman's packet.

We appreciate all of the AMEs who have done as we have requested and promise to work further to improve the medical certification process.

New Certification Policies

We have recently changed our policies towards certifying applicants with malignant melanoma, breast, and lung cancers. Due to the increasing numbers of airmen applications for medical certification with these conditions, it

was decided to evaluate the efficacy in determining the available medical tests that could stratify the risk of sudden medical incapacitation due to seizure. If there were ever a study that could provide evidence of a low risk to aviation safety, medical certification would be possible. This study turns out to be the MRI (magnetic resonance imaging) of the brain. The overwhelming majority of specialists whom we queried support the view that the MRI is the study that can detect a central nervous system lesion before it becomes symptomatically apparent.

For first- and second- class applicants who have a lesion that is a Breslow thickness less than 0.75 mm, we will allow standard issuance with the usual stipulations about ceasing flight activities if they develop a new lesion or are placed on a treatment protocol.

First- and second- class applicants who have a Breslow lesion greater than 0.75mm or who have local lymph node metastasis will require an Authorization for Special Issuance with a current status of their condition and MRI every 12 months for at least five years. The consultants whom we questioned feel that local lymph node disease is a different entity than distant metastasis. This would, of course, require one to know the primary site. So, distant lymph node spread will require different management.

For first- and second-class airmen who have metastatic melanoma beyond local lymph nodes, excluding the central nervous system, we will require that they be denied for three years after the completion of treatment before they may receive a Special Issuance. Of course, they would be required to present information that they are disease-free at the

New policies
towards certifying
applicants with
malignant
melanoma, breast,
and lung cancers.

conclusion of this observation period. Their requirements will be that they provide the AMCD with a current status and MRI of the brain every six months.

For those airmen with CNS metastasis, they will be denied for a period of five years after completion of treatment, at which time they will also require every three-month status reports and MRI. The frequency of follow-up reports and MRI imaging shall be yearly for five years. After the five years, that frequency may be reduced, depending on the situation.

In the case of a CNS lesion, the airman will need to be off all anticonvulsant medication for a period of two years and have a negative history of seizures.

Limited second- and third-class medical certification will be granted for the above conditions, except that the time intervals required for follow up reporting will be doubled.

These protocols will also be extrapolated to those individuals with metastatic breast or lung cancer.

These new protocols for certifying airmen with melanoma, breast, and lung cancer are an advance over our previous policies—with the evidence of metastatic disease, these applicants would have previously received permanent denials.



Dr. Silberman manages the Civil Aeromedical Institute's Aeromedical Certification Division.

Atrial Fibrillation and Substance Abuse

Case Report, by Steven R. Parks, MD, MPH

Introduction

This case report describes a 40-year-old man applying for his student pilot medical certificate. The applicant's history is remarkable for chronic atrial fibrillation, past substance abuse (cocaine), and one episode of seizure. He is currently on no medications.

History and Physical Findings

During the physical examination, it was noted that the heart rate was regular; however, an ECG revealed atrial fibrillation. Lung and abdominal exams were normal. No deficits were noted on neurological examination, and the mental status was intact. Head and neck exam was unremarkable. Urinalysis and vision testing were normal. The aviation medical examiner (AME) deferred the certificate for further evaluation.

Further history from the case file reveals that the patient was first diagnosed with atrial fibrillation in 1985, at the age of 25. Attempts at cardioversion and medication control were all unsuccessful. Currently, he is not taking any medications. The last cardiovascular workup was performed in 1994 with Holter monitoring and echocardiogram. The monitoring revealed chronic atrial fibrillation, whereas the echocardiogram showed no anatomical abnormalities of the heart. Also, thyroid studies revealed no abnormalities.

The medical record also revealed two hospital admissions for cocaine abuse during 1994. Both records suggest that his atrial fibrillation was secondary to past cocaine use. His first admission for drug detoxification revealed a normal course without complications. At that time, he was also treated for depression and

was subsequently released. Later that same year, he was readmitted for repeated cocaine use. This time, he had developed a seizure after using cocaine. He was subsequently rushed to the hospital and admitted. An MRI of the brain revealed no structural abnormalities, and his cocaine use was ascribed to be the cause of his seizure. Shortly thereafter, he stopped his therapy for depression, stating that he did not like the way the medications made him feel. With his current aeromedical certification exam, the applicant stated that he has been drug-free since 1995, with no episodes of depression.

Discussion

There are many predisposing factors to atrial fibrillation. These include hypertension, ischemic heart disease, valvular disease, cardiomyopathies, congestive heart failure, congenital heart diseases, pulmonary embolism, thyrotoxicosis, chronic lung diseases, pericarditis, and neoplasms. Normal hearts can also develop atrial fibrillation due to the stresses of alcohol, drugs, excess caffeine, hypoxia, systemic infections, electrolyte abnormalities, or stress itself.

Although atrial fibrillation may, in some cases, present as an asymptomatic finding on physical examination or electrocardiogram, more commonly atrial fibrillation results in significant symptoms and even significant hemodynamic impairment. Symptoms may range from palpitations, angina, congestive heart failure, pulmonary edema, and hypotension. Other signs and symptoms may include fatigue or weakness. The most severe presenting signs or symptoms may be the result of a thromboembo-

lic event leading to stroke. Most signs and symptoms occur due to the derangement of electrical conduction and the effects on the hemodynamics of the heart.

Appropriate workup for atrial fibrillation would include a thorough history and physical examination. Electrocardiogram, 24-hour Holter monitoring, echocardiogram, stress testing, thyroid studies, and other appropriate imaging studies will be necessary. Based on these studies, atrial fibrillation can be appropriately classified and treated.

Atrial fibrillation is classified by its duration as being paroxysmal, persistent, or chronic. Treatment is geared towards the control of the heart rhythm, hemodynamic control, and reducing the risk of stroke due to thromboembolic events. Control of the heart rhythm can be accomplished through medicines or cardioverting techniques. Most patients with atrial fibrillation are placed on anticoagulants because of the risk of developing thrombosis in the malfunctioning atrium. Risks of stroke and other cardiovascular complications generally increase with age.

Regarding substance abuse, illegal drug use has become more prevalent in the US. Difficulties arise, especially in regards to airmen, due to the mind-altered state that drugs may cause. With long-term use of some substances, there are greater risks of drug-induced psychoses and flashbacks. Also, with current abuse, the use of illicit drugs can have physiological effects on many different organ systems (e.g., seizures or effects on the heart).

Substance abuse is defined as the use of a drug or other substance by a person to modify a mood or state of mind in a manner that is potentially harmful or illegal. Drug abuse, by

Dr. Parks works in the University of Oklahoma's Occupational Medicine Department. He was on a clinical rotation at the Civil Aeromedical Institute when he wrote this case study.



itself, does not imply addiction. Treatment includes hospitalization, if necessary, full psychiatric and psychological workups with appropriate treatment for any mental disorders, interventions as necessary, and sustained social and medical support for continued abstinence and prevention of relapse.

Disposition

The applicant under discussion has two conditions that adversely affect his ability to be medically certified as a pilot: atrial fibrillation and documented substance abuse. According to the regulations (14 CFR Part 67), examiners are to deny or defer issuance for both conditions.

For atrial fibrillation, the concerns are that the patient's hemodynamic status is not compromised and that risk of stroke is minimal. It is reassuring that his echocardiogram reveals no anatomical heart abnormalities or thrombus formation. However, his record lacks a current Holter monitor and stress testing to rule out life-threatening arrhythmias or myocardial ischemia.

Chronic atrial fibrillation is acceptable if shown to be stable, if the heart has good ventricular function, and if no other serious cardiovascular abnormalities are present. Airmen taking anticoagulants are required to submit INR reports on a scheduled basis.

Substance abuse is a serious matter because abusers are unpredictable. Our applicant was last documented to have abused drugs in 1995. Since that time, there is no documentation of continued abstinence.

Outcome

Certification was denied for this airman. He may seek certification once the appropriate documentation is in place. He needs a current report from a cardiologist that should include a current Holter monitoring and stress testing. He will also need a current psychiatric and psychologi-

cal evaluation to determine the status of his substance usage. Also, he will need current letters of recommendation from people who know him well enough to verify his abstinence.

The history of a seizure in this man was not disqualifying for him since it was a seizure due to a known cause (cocaine use). The seizure was single and isolated, and since he has not had one since then, does not disqualify him for certification. However, he must have a neurological evaluation after a recovery period of at least one year.

This applicant's case was a complicated by multiple conditions that are potentially incompatible with safe piloting. To become certified, he will need to provide documentation showing that his past drug use and current atrial fibrillation are not currently symptomatic and do not interfere with his ability to pilot an airplane.

Bibliography

Atrial Fibrillation, Mina Chung, MD, Allan Klein, MD, December 1997.
SAM-CD Connected, David C. Dale, MD, Editor-in-Chief, 1999. Scientific American, Inc.

Certification Issues Concerning Substance Abuse, Case Study, Richard Villata, MD, MS. *Federal Air Surgeon's Medical Bulletin*, Fall 1998. FAA CAMI. Pp. 6-8.

Chapter 27; Recognition, Clinical Assessment, and Management of Arrhythmias and Conduction Disturbances: Atrial Fibrillation. Robert J. Myerburg, Kenneth M. Kessler, and Agustin Castellanos. *Hurst's: The Heart*. Editors; R. Wayne Alexander, MD, PhD, Robert C. Schlant, MD, and Valentin Fuster, MD, PhD. 1998. McGraw-Hill. Pp. 896-901.

Drug Abuse and Addiction, Steven E. Hyman, MD, November 1998. *SAM-CD Connected*, David C. Dale, MD, Editor-in-Chief, 1999. Scientific American, Inc.



AMEs Now Listed on CAMI Website

A complete listing of all active, civilian aviation medical examiners (AMEs) can now be downloaded from the Civil Aeromedical Institute's website. To access the listing, set your browser to <www.cami.jccbi.gov>; select "Aeromedical Education" and then select "Directory of Aviation Medical Examiners." Below the table, which can be used to locate AMEs in a variety of methods, there are two links that can be viewed or downloaded. One provides the record layout of the AME data, while the other is a link to the AME data. The file that you download is a tab-delimited text file.

If you need help to access or download the files, contact:

David Nelms, AAM-400
Aeromedical Education Division
(405) 954-4834

Available on the Web

Visit the Civil Aeromedical Institute's website to read:

- ✓ current and back issues of the *Bulletin*
- ✓ editorials by the Federal Air Surgeon
- ✓ *downloadable* directory of aviation medical examiners
- ✓ great links to aviation-related websites
- ✓ full-text issues of OAM technical reports
- ✓ free MEDLINE from the National Library of Medicine
- ✓ Free Flight Human Factors Page
- ✓ much more at the URL:
<http://www.cami.jccbi.gov>



Personality Disorder: A Potential Threat to Aviation Safety

Case Report, by Shu-Hui Wang, MD

Synopsis: *A routine accident investigation revealed disturbing aspects of a pilot's personal life that could affect his ability to safely perform his duties. Tests were ordered to seek out the answer. The ensuing mental status examination, family history, and personal history revealed a rational, conventional, non-psychotic individual with longstanding character pathology and a history of incestuous behavior. The psychiatric conclusion is that the pilot is prone to conduct disorders and, according to the diagnosis criteria of personality disorders (DSM-IV), may belong in the antisocial personality disorder group. Can he be medically certified to fly?*

THIS 41-YEAR-OLD PRIVATE pilot with a second-class airman medical certificate had accumulated more than 600 total flight hours. On this day, he had been flying with his wife and had planned to land at a nearby local airport. However, as they passed over their home enroute to the airport, they saw a truck in their yard belonging to a man with an unsavory reputation. This upset the pilot because he knew that his young daughter was at home alone. He felt certain that she was being sexually molested by the man, so he made two low passes at about 500 feet over the house in an attempt to frighten the man away. Subsequently, the pilot decided to land his plane in a nearby field so he could confront the intruder. During the landing attempt, his plane crashed, and he and his wife were injured.

The FAA investigated this accident, and found that, two months prior to the event, the pilot had been hospitalized for an emotional problem. His psychological disorder may have contributed to the accident. Following the accident, the Aeromedical Certification Division (AMCD) requested hospital and medical records to reevaluate the airman's qualification to hold an airman medical certificate. The history is as follows:

Childhood. The pilot had an unhappy childhood, and had been involved since almost age 5 with sexual

abuse. His father and mother were divorced when he was about 9 years old. Prior to the divorce, he was physically abused by his father. He recalled that he was often teased, humiliated, and punished, and received repeated, unprovoked beatings. He did not feel loved by his father, nor was he close to his mother. He stated when he was about 6 years old, his mother frequently exhibited inappropriate sexual behavior toward him.

Teen years. As a student, he was "unmotivated," completing only the ninth grade because of repeated truancy. He went to work and frequently changed jobs. He displayed unusual sexual behavior throughout his teen years.

Adult years. He joined the Air Force at age 18 and was discharged after 5 years' service. He denied having any sexual activities or thoughts of sexual activity with his fellow servicemen. He got married shortly after leaving the service and has a son and 2 daughters. He continued to display the abnormal sexual behavioral patterns he experienced as a child, and there were several episodes of aberrant behavior involving his children as well as others outside his family. He never felt guilty or ashamed of other relationships because he thought of it as a way of expressing love, and he did not feel it was hurting anyone. He was admitted to the hospital with a diagnosis of emotional problems/sexual deviation and was discharged after 5 days.

Mental status examination

The pilot was polite, motivated, and cooperative. He appeared his stated age, was neat and clean. He was painfully honest and direct when discussing some of the details of his past sexual behavior. He was eager to make a good impression, and was acutely sensitive as to how he would be perceived for his responses. He showed he was confident of overcoming his past inappropriate actions, and seemed eager to return flying.

His gestures and mannerisms were unremarkable, with no compulsive action, illusions, or hallucinations. His verbal behavior revealed no signs of thought disorders or deviant verbalization. Memory for recent and remote events was excellent. Attention and recall were within normal limits. He was not preoccupied with any obsessions, no delusion or flights of ideas. On the WAIS test, the pilot achieved a verbal IQ of 131, performance IQ of 131, and a full scale IQ of 133. These results place him in the very superior intellectual range. In the verbal subscales, his best performance was on the mental arithmetic, and the poorest performance was on the information and similarity. He had high scores on the comprehension test, which attested to his understanding of social convention and prevailing mores. On the performance subscales, his poorest performance was on the visual-manual coordination task. This reflected the discrepancy between his superior intellectual capacity and his meager

Dr. Wang, a native of Beijing, China, was a participant in the International Exchange Visitor program from 1995-1997. She wrote this report while working and studying at the Civil Aeromedical Institute.



academic performance, which had contributed to his losing interest in school. His judgment and insight were good, abstract thinking was normal. He was in moderately depressed state and exhibited inappropriate affect. On both the Draw a Person Test and TAT, the results reflected some difficulty over sexual identification. The failure to develop appropriate sexual identity, which was thought to a great degree to result from his early family and personal history, resulted in the confusion of both generation and gender boundaries. In addition, the results from the MMPI and the Rorschach tests indicated no remarkable evidence of manifest anxiety and guilt, which is important evidence in establishing a psychopath diagnosis.

In summary, the mental status examination, family history, and personal history revealed a rational, conventional, non-psychotic individual with longstanding character pathology and a history of incestuous behavior. The psychiatric conclusion

is that the pilot is prone to conduct disorders and, according to the diagnosis criteria of personality disorders (DSM-IV), may belong in the antisocial personality disorder group.

Discussion

Personality disorders are defined as particular traits or styles of interaction with others that are so marked, so maladaptive, or so lacking in flexibility that the individual suffers personal distress or is significantly impaired in social interactions or occupational functioning. This distress or impairment may begin in adolescence and will generally continue throughout the adult years, perhaps diminishing in late middle age.

The airman does not meet the medical standards in part 67.107, 67.207, and 67.307 (a)(1) of the Federal Aviation Regulations, which state: "...no established mental history or clinical diagnosis of a personality disorder that is severe enough to have repeatedly manifested itself by overt

acts." It is 1 of the 10 specifically disqualifying conditions. After completely reviewing the pilot's medical records, the Federal Air Surgeon denied his airman medical certification. Subsequently, he appealed to the NTSB for an exemption based on the grounds that he believed his medical condition would not interfere with his safe operation of an aircraft. Due to his long history of personality disorder and the likelihood of continued antisocial behavior, his appeal was denied.

Current status

After 8 years of rehabilitation and observation, a complete psychiatric evaluation indicated that the pilot had recovered remarkably from the past conditions. Therefore, a special issuance of a second-class airman medical certificate was granted, with the requirement for a follow-up psychiatric evaluation in two years.



AME PROFILE from page 1

poison," and in answer to the question of the amount of water required daily by your body, "If your urine is clear, you are getting enough water."

The clear, concise, and entertaining articles Stoutt developed for the *Bulletin* expanded upon the major topics he had identified as being significant health issues to pilots. The articles are written in lay language, without pretense or stilted language. The secret to his writing style: extensive study, attention to details, and careful choice of words. Stoutt says one day he mentioned to his wife that he spends "at least ten hours on each page in research and trying to write clear sentences." She asked, "What do your get out of it?" He answered, "Psychic income." Waiting about

three beats, she looked down, then up at her husband and said, "Don't quit your day job."

The goal of his writing is to communicate standards for healthy living that will be adopted and incorporated into a revised lifestyle. The benefits are obvious, he says, "You can't live longer than your genetic limit, but you can have a much shorter life by not taking care of yourself. Don't be warehoused in a nursing home at age 80. Your health, vigor, and happiness in later life depend largely on your present lifestyle. Prepare for a great time."

The articles that Stoutt wrote for the *Bulletin* have been so popular that many were widely reprinted in *Twin and Turbine* magazine, *FAA Aviation News*, and other publications aimed at the pilot community.

In addition to his involvement in

aviation as an AME, Dr. Stoutt is a board-certified pediatrician, specializing in attention deficit disorders. His partner at the Springs Pediatrics and Aviation Clinic in Louisville, Ky., Dr. Michael Howard, is also an aviation medical examiner and a pediatrician. They see an average of 1,000 medical certification applicants yearly.

At 71 years of age, Stoutt has reduced his office work week to three days, but he stays active in other pursuits such as research, writing, socializing, and teaching. He is a Clinical Professor of Pediatrics at the University of Louisville School of Medicine. His professional affiliations include the Aerospace Medical Association, the Kentucky Medical Association, and the American Academy of Pediatrics.



Office of Aviation Medicine *NEWS*

AAM Employees Recognized for Work

Annual Awards for Excellence and Achievement

The Federal Aviation Administration's Office of Aviation Medicine (AAM) held its annual awards program in Washington, DC, to recognize the contributions its people made to aviation medicine. Each year, AAM employees from across the nation are nominated by their colleagues for recognition in the various categories, and the winners are selected by a national awards panel. The awards ceremony was conducted by Federal Air Surgeon Dr. **Jon Jordan** and Deputy Federal Air Surgeon Dr. **Fred Tilton** on April 26, 2000. The Friend of Aviation Medicine award was given to FAA employees working in other offices.

Following are the winners in each category.

Outstanding Manager

★ Ronald W. Hansrote, MD
Civil Aeromedical Institute

Outstanding Leadership

★ Judith M. Citrenbaum
Headquarters

Outstanding Innovator, Scientific/Technical

★ Richard L. Butler
Civil Aeromedical Institute

Administrative/Support

★ Jacqueline C. Bivins
Civil Aeromedical Institute

Outstanding Team

★ Rogers V. Shaw, Roger A. Storey, Junior G. Brown, Harold D. Nelson, James P. Spanyers, & Larry M. Boshers
Civil Aeromedical Institute

Technical/Scientific Publication

★ Michael C. Heil, PhD
Civil Aeromedical Institute

Mission Support

★ Guillermo J. Salazar, MD
Southwest Region
★ Melchor J. Antuñano, MD
Civil Aeromedical Institute

Outstanding Customer Service

★ Michael E. Wayda
Civil Aeromedical Institute

Office of the Year

★ Toxicology and Accident Research Laboratory
Civil Aeromedical Institute

Administrative Excellence

a. (tie)
★ Patricia L. Bickford
Southern Region
★ Eunsook C. Welsh
Headquarters
b.
★ Helen Zingman
Headquarters

Flight Surgeon of the Year

★ David P. Millett, MD
Southern Region Medical Office

Inspector of the Year

★ Ralph J. Gallegos
Headquarters

Friend of AAM

★ Janice Chaffin & ★ Jeff Kledik
Flight Standards Service, Special Program Staff, Mike Monroney Aeronautical Center

Hansrote Retires



Dr. Hansrote

RONALD W. HANSROTE, MD, manager of the Civil Aeromedical Institute's Occupational Health Division, retired June 30 to return to Florida, where he began his FAA career. Hansrote joined the agency in 1991 as the FAA flight

surgeon working at the Miami (Fla.) Air Route Traffic Control Center.

In 1996, he moved to Oklahoma City to accept a position as a medical officer on CAMI's Accident Research Team. Two years later, he became the Occupational Health Division manager. He also lectured at the Transportation Safety Institute on bloodborne pathogens, aircraft accident investigations, and human factors.

Hansrote will assume the position of Assoc. Prof. of Aeronautics at Florida Institute of Technology in Melbourne, Fla., where he will teach aeronautics courses and flight instruction.

In addition to being a board-certified physician, Hansrote is type-rated in a number of civilian and military aircraft. A former military pilot/physician who retired from the US Air Force Reserve in 1997 as a Lt. Col., he began his military career with the US 2nd Marine Air Wing in 1965 as a flight surgeon and aviator.

Accorded numerous awards during his FAA career, Hansrote's most recent honors included designation as the Office of Aviation Medicine's outstanding manager for 1999 and CAMI Employee of the Year. He was the FAA's lead medical investigator for the ValuJet Flight 592 and TWA Flight 800 accident investigations; and he was responsible for implementing nationwide aircraft accident autopsy databases.

Hansrote received his MD degree from the University of Nebraska in 1963 and graduated from the US Navy's School of Aviation Medicine in 1965. He is an active member of numerous professional organizations.

In saying good-bye to his friends at the FAA, Dr. Hansrote said he is "very sad and reluctant" to end a career that has meant so much to him. However, he "is excited about teaching and mentoring students who will provide the next generation of aviation leadership."

When You Care Enough

Paula Harkins, program analyst for the Southwest Regional Aviation Medical Division, received a *Good Friend Award* from the Federal Aviation Administration's Baton Rouge Flight Standards District Office (FSDO).

The award was presented on May 10 by Kay Fulkerson and Lisa Cotham, Baton Rouge FSDO. Harkins was cited for solving medical certification problems for pilots and safety inspectors. According to the FSDO, Harkins "cares enough to do her very best to get their problems solved. The general aviation community is fortunate to have someone like her on their side when they have a medical problem."

Other actions praised by the FSDO:

- "She never complains about taking time to answer some of the simplest of questions. She seems to enjoy researching the hard questions and gives the impression she enjoys her work."
- "She constantly tries to improve the way her office does business on a day-to-day basis."
- "She is not only a good friend to the Baton Rouge FSDO, she is also a good friend

FAA Administrator Tours CAMI: DIWS Highlighted

Jane F. Garvey, FAA Administrator, recently toured CAMI during a visit to the Mike Monroney Aeronautical Center. Providing the administrator with a pictorial review of the Aeromedical Certification Division's new Internet process is division manager Dr. Warren Silberman.



Paula Harkins, (center) receives "Good Friend" award from FSDO Inspector Kay Fulkerson (right) as Southwest Regional Flight Surgeon Dr. G.J. Salazar looks on.

to the Flight Standards Service, and to the flying public.

• "When a pilot has a medical problem, time is of the utmost importance. Time is money when it comes to flying."

On the last point, Harkins was commended for taking "personal interest in solving problems, finding paperwork presumed to be lost, and for researching each issue in a timely manner, often issuing a current medical certificate within a few days."

Paula Harkins has worked in the Southwest Regional Aviation Medical office for 11 years.

AsMA Space Medicine Highlights

Dr. Melchor Antuñano, Manager of the Aeromedical Education Division, gave a guest lecture on "Manned Commercial Space Operations in the 21st Century" during the Space Medicine Branch's business luncheon of the Aerospace Medical Association (AsMA) in Houston, Texas, May 2000.

During his lecture, he described the role of the Federal Aviation Administration in



Pictured (L-R) are Drs. Robin Dodge (SMB President) and Antuñano.

commercial space transportation, discussed several space law issues, and identified the regulatory aerospace medicine issues of manned commercial space flights.

In other business, Dr. Antuñano was appointed president-elect of the Space Medicine Branch. He also began his second-year term as a vice-president of AsMA and he was appointed chairman of AsMA's Scientific Program Committee (2000-2001).

Just for the Health of Pilots

By Glenn R. Stoutt, Jr., MD
Senior FAA Aviation
Medical Examiner

DEPRESSION A Recoverable Stall

'Just as an aircraft can stall from too great an angle of attack, too little power, too heavy a load, a person can develop a mental stall.'



So pervasive that it's called "the common cold" of psychiatry, depression can cover a wide gamut of symptoms. Here are some ways to fight back.

Good news and bad news

FIRST, THE BAD NEWS IS THAT depression is now so common that it is called "the common cold of psychiatry." Between 10 and 20 million people in our privileged and affluent country suffer from it to the degree that they need treatment. *Suffer* is surely the proper word. One man in ten and one in four women will be affected (afflicted) by it at some time during their lifetime.

Depression covers a huge spectrum. It does not just refer to the days when we feel "blue," have the "blahs," or "down in the dumps." Everyone has days like this. The question to ask in evaluating depression is, "What is the *degree of impairment* in one's life that depression is causing?"

The American Psychiatric Association has clearly defined some of the cluster of symptoms that occur in clinical depression (the type that definitely needs treatment) and major depression (one so severe that the patient may have to be hospitalized and certainly has

difficulty carrying on even a fairly normal life):

- ◆ Feeling *depressed* most of the day, starting on awakening. Worse in the morning; gets better as the day goes on. The feeling of depression may be *overwhelming, disabling, dominating and devastating*.
- ◆ *Loss of interest in activities that usually cause enjoyment* (the ten-dollar word is *anhedonia*—or lack of fun). *Social withdrawal*.
- ◆ *Tearful*.
- ◆ *Fatigue*, loss of energy.
- ◆ *Change in sleep patterns*. Trouble in falling asleep. Waking up early two or more hours in the morning and not being able to get back to sleep. Sometimes wanting to sleep or lie down most of the day.
- ◆ Pervasive feelings of *sadness and grief*, maybe leading to a feeling of *helplessness*. If it progresses to *hopelessness*, suicide is a major threat. If the patient mentions suicide, consider it a psychiatric emergency. Get help—fast. Suicide

is the eighth cause of death in adults, and is number three in adolescents and young adults, both boys and girls.

- ◆ Noticeable *change of appetite*, usually decreased, with some resulting weight loss.
- ◆ *Irritability* (this, more than sadness, is the major symptom in children and adolescents).
- ◆ Feelings of undeserved *guilt, worthlessness, or sinfulness*.
- ◆ *Inability to concentrate or think clearly*.
- ◆ Indecisiveness.
- ◆ *Illogical thought patterns and misinterpretation of reality*.
- ◆ All sorts of *physical symptoms* can be caused by depression: headaches, stomachaches, and backaches (the big three).
- ◆ Sometimes there is *agitation*, pacing the floor, inability to sit still. This is called *agitated depression*.

Another category, called **Dysthymic Disorder** ("Depression Lite") is used to describe people who do not have major depressive symptoms, but who seem to have been mildly depressed all their life, in a low-level funk. They might not even recognize it ("I've always been

Continued ➤

Dr. Stoutt is a partner in the Springs Pediatrics and Aviation Medicine Clinic, Louisville, Ky., and he has been an active AME since 1960. No longer an active pilot, he once held a commercial pilot's license with instrument, multiengine, and CFI ratings.

this way.”) But their family and friends note that they never have much fun or excitement, and always seem “down.”

Most of us have a happiness set point just as we have a set point in weight or basal metabolism. But, things can add up until we have “too much on our emotional plate.” Just as an aircraft can stall from too great an angle of attack, too little power, too heavy a load, a person can develop a “mental stall.” Most of our mood pattern, and definitely our tendency toward depression, is hereditary. But, regardless of this, loss of a loved one, loss of a job, financial problems, divorce, illness, alcoholism and drug abuse, unhappy marriages, and nowhere jobs can push a person into depression. This type of depression is called **Exogenous Depression** (caused from outside factors), whereas **Endogenous Depression** (from internal causes) is probably inherited, probably chemical in nature, and often unavoidable (but not untreatable). Endogenous depression may *suddenly* develop for no apparent reason.

Think of the brain as a *skull-enclosed, three-pound, electrochemical analog computer*. This leads us to some of...

The good news

Depression is not only the most common mental disorder but also the most treatable, with an 80-90 percent success rate. The foundation of all treatment is a **combination** of psychotherapy (talk therapy) and psychopharmacology—both complement each other.

Psychopharmacology is the new wave of psychiatry. One of the newer texts contains over 500 pages describing some of the medications used in treating mental disorders.

The most common medications used today to treat depression—we all know someone on them—are the Selective Serotonin Reuptake Inhibitors (SSRIs). Serotonin is a chemical the brain needs for maintaining a good mood—SSRIs keep the level from being depleted. Prozac, Zoloft, and Paxil are among the most prescribed SSRIs. The FAA does not presently certify persons who use

mood-altering medication. The reasoning is twofold: the underlying condition that requires the medication and the potential adverse side effects from the medication itself. The good news is that the FAA is willing to return virtually all clinically depressed pilots back to flying after successful treatment.

If depression seems likely or even if you are just not enjoying your life as you used to, seek out a therapist whom you like and develop a *therapeutic alliance*. (True story: “My psychiatrist is great, but she’s an awfully hard person to talk to.”) You cannot analyze or intellectualize your problems away alone, or even see them objectively—seek a mental-health professional.

Four ways to strengthen your defenses

- **Avoid booze.** Alcohol abuse is probably just an attempt at self-medicating feelings of depression. Alcohol *always* makes depression worse. It is used not so much to feel good as it is to avoid feeling bad. Many depressed people with hangovers jump out of hotel windows on Sunday mornings. Avoid it.

- **Exercise more.** All studies positively stress the use of exercise. Exercise releases endorphins—the body’s joy juice. It is probably responsible for the “runners’ high.” Large-muscle activity (thighs) may help discharge feelings of pent-up frustration, anger, and hostility. (Anger turned inwardly is a major cause of fatigue and depression.) The downside of this wonderfully effective treatment is that most depressed people just don’t have the energy or motivation to get up and exercise.

- **Forgive yourself.** Don’t try to be perfect. Remember that there are more than 6 billion people on Earth, and hundreds of thousands of them can do even better what you do best.

- **Open up more.** Men just don’t want to admit of anything that takes away from the macho image. Depression is thought of as a wimp disorder. Men may just tough it out until the Smith & Wesson cure seems the only solution. Harvard Medical School psychologist

Dr. William Pollack said, “Men are limited pretty much to a menu of three strong feelings: rage, triumph, and lust. Anything else and you risk being seen as a sissy.” Men (pilots?) have a tendency to self-destruct. The Macho Marlboro Man would do better to open his feelings up, show some intimacy, and admit that things are not going so well for him. Women outlive us by an average of seven years. Some of this may be not only from estrogen, but also from a willingness to talk intimately to friends about problems—even to admit that they have problems.

Humor! Our emotional parachute

“Sense of humor is a measurement of the extent to which you realize that you are trapped in a world almost totally devoid of reason. Laughter is how you release the anxiety you feel about this.”

—Dave Barry

Joy is defined in all dictionaries, but tells us nothing about what it really is. If you want to know what pure fun, joy and happiness are, just watch a young Labrador retriever play in the field for an hour, running for the hell of it, chasing leaves and butterflies and then come running to you when you call, shaking all over, slobbering and licking your face. Unconditional love; dogs don’t carry grudges.

A criminal was sentenced to 20 years. He said, “Judge there’s no way I can do 20 years!” The judge looked down for a couple of seconds and said, “Well, just do the best you can.”

Do the best you can, and...try to have more fun in your life. If you find no humor in things—can’t laugh (especially at yourself) and enjoy life, remember that you can usually find the right answer if you ask the right person. This person is probably a competent mental-health professional. In the meantime, spend a lot of time with people who love you, your family and good friends.

Yours for good mental and physical health, and safe flying,

Glenn Stoutt

Note: The views and recommendations made in this article are those of the author and not necessarily those of the Federal Aviation Administration.

AME TRAINING

Aviation Medical Examiner Seminar Schedule

2000

July 7-9 -----	Chicago, Ill. -----	AP/HF (2)
†August 7-11 -----	Oklahoma City, Okla. -----	Basic (1)
September 8-10 -----	Reno, Nev. -----	OOE (2)
October 27-29 -----	Kansas City, Mo. -----	CAR (2)
December 4-8 -----	Oklahoma City, Okla. -----	Basic (1)

2001

January 12-14 -----	San Diego, Calif. -----	N/NP/P (2)
February 23-25 -----	Houston, Texas -----	AP/HF (2)
March 19-23 -----	Oklahoma City, Okla. -----	Basic (1)
April 20-22 -----	McLean, Va. -----	OOE (2)
May 14-17 -----	Reno, Nev. -----	AP/HF (2)
June 11-15 -----	Oklahoma City, Okla. -----	Basic (1)

CODES

AP/HF --- Aviation Physiology/Human Factors Theme

CAR ----- Cardiology Theme

OOE ----- Ophthalmology - Otolaryngology - Endocrinology Theme

N/NP/P -- Neurology/Neuro-Psychology/Psychiatry Theme

- (1) A 4½-day basic AME seminar focused on preparing physicians to be designated as aviation medical examiners. Call your regional flight surgeon.
- (2) A 2½-day theme AME seminar consisting of 12 hours of aviation medical examiner-specific subjects plus 8 hours of subjects related to a designated theme. Registration must be made through the Oklahoma City AME Programs Branch, (405) 954-4830, or -4258.
- (3) A 3½-day theme AME seminar held in conjunction with the Aerospace Medical Association (AsMA). Registration must be made through AsMA at (703) 739-2240.

The Civil Aeromedical Institute is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

†The Basic AME Seminar scheduled for August 7-11, 2000, has been cancelled.

Meetings Calendar

International Events of Interest for 2000

July 30-Aug. 4, San Diego, Calif.

Triennial Congress and Human Factors and Ergonomics Society Annual Meeting. Info: HFES, P.O. Box 1369, Santa Monica, CA 90406-1369; Phone: (310) 394-1811; FAX: (310) 394-2410; Email: <hfes@compuserve.com>; Website: <www.hfes.org>

Sept. 17-21, Rio de Janeiro, Brazil.

International Congress of Aviation and Space Medicine. Info: Dr. Marco Antonio Montenegro, Rua Mario de Albuquerque, 380, Condominio Rio Mar I - Barra da Tijuca, Rio de Janeiro, Brazil - CEP: 22793-310; Phone: (5521) 325-7561; FAX: (5521) 431-2391; Email: <montenegro@highway.com.br>; Website: <www.icas2000.com.br>

Sept. 20-23, Athens, Greece.

"Caring in the Skies." Info: Stella Tsiga, P.O. Box 61029, Maroussi PC: 15 110, Athens, Greece; Phone: 30-1-2817159; FAX: 30-1-2817997; Email: <airamb2000@otenet.gr>; Website: <www.airambulance.gr>

Sept. 24-28, Branson, Mo.

Air Rescue Association Annual Reunion. Info: Air Rescue Association, 222 Greycliff Dr., San Antonio, TX 78233-2507; Phone: (210) 656-0306; FAX: (210) 656-5311; Website: <pedroairrescuechopper.net/ara>

Sept. 24-29, Edinburgh, Scotland.

International Council of Aircraft Owner and Pilots Association World Assembly. Info: Ruth Moser; Phone: (301) 695-2220; FAX: (301) 695-2214; Website: <www.iaopa.org>; Email: <infor@iaopa.org>

Oct. 4-7, Memphis, Tenn.

Civil Aviation Medical Association Annual Scientific Session: Interface 2000. Info: CAMA, P.O. Box 23864, Oklahoma City, OK 73123-2864; Website: <www.civilavmed.com>

Oct. 20-22, Long Beach, Calif.

Aircraft Owner and Pilots Association EXPO 2000. Info: Warren Morningstar; Phone: (301) 695-2162; Email: <warren.morningstar@aopa.org>